

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): An irradiation apparatus for photodynamic therapy comprising,

a discharge lamp which has a function to emit light having the wavelength region of the main absorption within the range of the wavelengths of 600nm-800nm,

said discharge lamp is filled with 0.1 $\mu\text{mol}/\text{cm}^3$ or more of at least one selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb), and potassium (K) as an emitting element, wherein tin or rare-earth metal is not filled, and

further filled with at least one rare gas selected from the group consisting of neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe), and

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a lighting system capable of applying a light radiated from the discharge lamp to a photosensitizer having a relatively large absorption coefficient within the range of the wavelengths of 600 nm - 800 nm.

Claim 2 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein lithium (Li) is filled as the emitting element for radiating the lights of 600nm-640nm, and 660nm-720nm of the wavelength region of the main absorption.

Claim 3 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein sodium (Na) is filled as the emitting element for radiating the light of 600nm-640nm of the wavelength region of the main absorption.

Claim 4 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein rubidium (Rb) is filled as the emitting element for radiating the light of 755nm-800nm of the wavelength region of the main absorption.

Claim 5 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein potassium (K) is filled as the emitting element for radiating the light of 760nm-800nm of the wavelength region of the main absorption.

Claim 6 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein at least two elements selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb) and potassium (K) are filled as the emitting elements.

Claim 7 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein mercury (Hg) is further filled for increasing line in the emission spectrum of said lithium (Li), sodium (Na), rubidium (Rb), and potassium (K).

Claim 8 (Currently Amended): An irradiation apparatus for photodynamic therapy or photodynamic diagnosis comprising,

a discharge lamp which has a function to emit light having the wavelength region of the main absorption within the range of the wavelength of 600nm-800nm and also emit light having the wavelength region of the main absorption within the range of the wavelength of 400nm-440nm,

said discharge lamp is filled with 0.1 $\mu\text{mol}/\text{cm}^3$ or more of at least one selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb), and potassium (K), and 0.1 $\mu\text{mol}/\text{cm}^3$ or more of mercury (Hg) as an emitting element, wherein tin or rare-earth metal is not filled, and

further filled with at least one rare gas selected from the group consisting of neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe), and

a means for selecting a wavelength which transmits selectively a light of a wavelength suitable to the wavelength range of absorption of a photosensitizer having a relatively large absorption coefficient within the range of the wavelength of 600nm-800nm, and a light of a wavelength suitable to a photosensitizer, which absorbs light within the range of the wavelength of 400nm-440nm, and emits fluorescence, and

a lighting system capable of applying a light radiated from the discharge lamp to the photosensitizers.

Claim 9 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein lithium (Li) is filled as the emitting element for radiating the lights of 600nm-640nm, and 660nm-800nm of the wavelength region of the main absorption.

Claim 10 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein sodium (Na) is filled as the emitting element for radiating the light of 600nm-700nm of the wavelength region of the main absorption.

Claim 11 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein rubidium (Rb) is filled as the emitting element for radiating the light of 755nm-800nm of the wavelength region of the main absorption.

Claim 12 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein potassium (K) is filled as the emitting element for radiating the light of 760nm-800nm of the wavelength region of the main absorption.

Claim 13 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein at least two selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb) and potassium (K) are filled as the emitting elements.

Claim 14 (Previously Presented): The irradiation apparatus for photodynamic therapy of Claim 1, wherein halogen is also filled into said discharge lamp.

Claim 15 (Previously Presented): The irradiation apparatus for photodynamic therapy or photodynamic diagnosis of Claim 8, wherein halogen is also filled into said discharge lamp.

Claim 16 (Currently Amended): A discharge lamp containing
as an emitting element $0.1 \mu\text{mol}/\text{cm}^3$ or more of at least one metal selected from the
group consisting of lithium (Li), sodium (Na), rubidium (Rb) and potassium (K); and
at least one rare gas selected from the group consisting of neon (Ne), argon (Ar),
krypton (Kr) and xenon (Xe), wherein
the discharge lamp does not contain tin or rare-earth metal.

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Claim 17 (Previously Presented): The discharge lamp of Claim 16, further containing
as an emitting element $0.1 \mu\text{mol}/\text{cm}^3$ or more of mercury (Hg).

Claim 18 (Previously Presented): A method of making an irradiation apparatus, the
method comprising
filling a discharge lamp with
 $0.1 \mu\text{mol}/\text{cm}^3$ at least one selected from the group consisting of lithium (Li),
sodium (Na), rubidium (Rb), and potassium (K), and
at least one rare gas selected from the group consisting of neon (Ne), argon
(Ar), krypton (Kr) and xenon (Xe); and
producing the irradiation apparatus of Claim 1.

Claim 19 (Previously Presented): A method of making an irradiation apparatus, the method comprising

filling a discharge lamp with

0.1 $\mu\text{mol}/\text{cm}^3$ at least one selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb), and potassium (K),

0.1 $\mu\text{mol}/\text{cm}^3$ or more of mercury (Hg), and

at least one rare gas selected from the group consisting of neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe); and

producing the irradiation apparatus of Claim 8.

Claim 20 (Previously Presented): A method of making a discharge lamp capable of radiating light having a wavelength in the range of 600nm-800nm, the method comprising

filling a discharge lamp with

0.1 $\mu\text{mol}/\text{cm}^3$ at least one metal selected from the group consisting of lithium (Li), sodium (Na), rubidium (Rb), and potassium (K), and

at least one rare gas selected from the group consisting of neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe); and

producing the discharge lamp of Claim 16.

SUPPORT FOR THE AMENDMENT

This Amendment amends Claims 1, 8 and 16. Support for the amendments is found in the specification and claims as originally filed. For example, the specification discloses:

An object of the present invention is to provide a discharge lamp, which mainly radiates a light suitable to a photosensitizer to be used in PDT and PDD, and, in addition, which **does not radiate a light other than the light**. Specification at page 5, lines 2-6.

A discharge lamp of the present invention radiates a light suitable for the wavelength range of absorption of a photosensitizer having a relatively large absorption coefficient within the region of the wavelength range of **600nm-800nm**. Specification at page 5, lines 7-11.

Furthermore, a discharge lamp of the present invention, which is used in photodynamic therapy or photodynamic diagnosis, preferably radiates both lights within the range of the wavelength (**600nm-800nm**) suitable to a photosensitizer, and the range of the wavelength (**400nm-440nm**) suitable for generating fluorescence. Specification at page 7, lines 5-10.

As shown in The Practicing Scientist's Handbook, pages 532-537, copy attached, and as discussed in the U.S. Patent No. 3,958,145 ("Jack") reference with respect to tin, tin and rare-earth metals emit light of wavelengths outside of the range of 600nm-800nm and 400nm-440nm. Because the specification discloses that according to the present invention, the discharge lamp "does not radiate a light other than the light" "suitable to a photosensitizer to be used in PDT and PDD"; and tin and rare-earth metals, if included in the discharge lamp, would emit light outside this suitable range of 600nm-800nm and 400nm-440nm, the specification supports the limitation of independent Claims 1 and 8 that "tin or rare-earth metal is not filled" in the recited discharge lamp and the independent Claim 16 limitation that "the discharge lamp does not contain tin or rare-earth metal". No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-20 will be pending in this application.

Claims 1, 8 and 16 are independent.